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(71)Applicant : KIKKOMAN CORP

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(72)Inventor : SAKAGAMI RYOICHI
 KOYAMA TAJI
 SUZUKI MASARU

(54) FRUCTOSYLAMINO ACID OXIDASE GENE, NEW RECOMBINANT DNA AND PRODUCTION OF FRUCTOSYLAMINO ACID OXIDASE

(57)Abstract:

PROBLEM TO BE SOLVED: To obtain the subject new gene, a gene encoding a protein having a specific amino acid sequence and exhibiting fructosylamino acid oxidase activity, and usable in e.g. the production of enzymes useful for e.g. assaying Amadori compounds in vivo or in foods.

SOLUTION: This new fructosylamino acid oxidase gene which encodes a protein having an amino acid sequence of the formula, or a protein having an amino acid sequence wherein one or more amino acids are deleted, substituted or added in the amino acid sequence of the above formula and also having fructosylamino acid oxidase activity, is used in e.g. the production of enzymes catalyzing reactions to form glyoxylic acid, α -amino acids, α -ketoaldehydes and hydrogen peroxide through oxidation of iminodicacetic acid and its derivatives (Amadori compounds) and therefore being useful for e.g. assaying Amadori compounds in vivo or in foods. This new gene is obtained by cloning *Corynebacterium* sp. No. 2-3-1 (FERM BP-6183) chromosome DNA.

Met	Ser	Ser	Thr	Ala	Thr	Lys	His	Val	Ala	Val	Ile	Gly	Gly	Gly
5									10					15
Ile	Leu	Gly	Val	Ser	Thr	Ala	Val	His	Leu	Leu	Arg	Gln	Gly	Ala
20									25					30
Trp	Val	Thr	Leu	Leu	Thr	Ser	Gln	Gly	Leu	Ala	Ser	Glu	Ala	Thr
35									40					45
Gly	Thr	Val	Ala	Phe	Thr	His	Ser	Gly	Ala	Thr	Leu	Gly	Leu	Ile
55									60					65
Ala	Gly	Gly	Leu	Pro	Ser	Gly	Gln	Ile	Leu	Thr	Gly	Asp	Lys	His
70									75					80
Pro	Met	Phe	Ala	Thr	Phe	Arg	Pro	Gly	Arg	Thr	Ser			
85									90					

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